EN
Original Version

SG30KTL/SG30KTL-M
Quick Installation Guide

This guide provides a general instruction of the installation procedures of SG30KTL and SG30KTL-M.
SG30KTL and SG30KTL-M will be referred to as inverter hereinafter unless otherwise specified.

⚠ NOTICE

In no case shall this guide substitute for the user manual or related notes on the device.
Make sure to read over, fully understand and strictly follow the detailed instructions of the user manual and other related regulations before installing the equipment.
Any violation could result in personal death or injury or device damage.

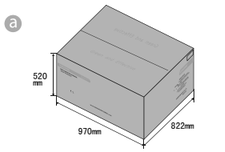
1 Unpacking and Inspection

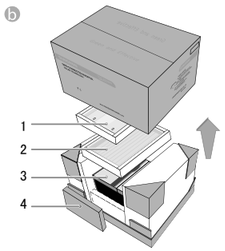
i. Unpack the carton and take out all the accessories.

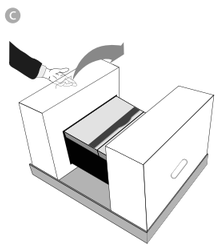
ii. Inspect the inverter for visible damages and check the completeness of the delivery contents according to the inner packing list.

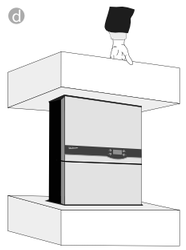
Contact your supplier if any of the contents is missing. SG30KTL/SG30KTL-M is unavailable if any damage is detected.

No.	Name
1	Backplate
2	Top cap
3	SG30KTL/SG30KTL-M
4	Documents & Accessories







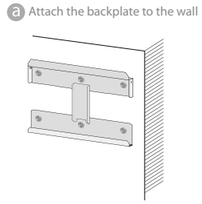


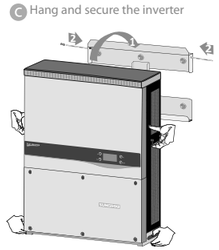
2 Mounting Inverter onto the Wall

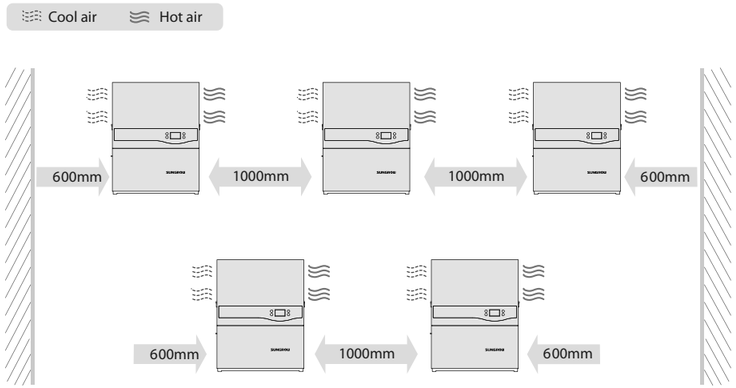
i. Select the installation location and regulate the clearances of multiple inverters, referring to the user manual.

ii. Move the inverter to the installation site with the help of another person or the lifting device by means of the handles.

iii. Install the inverter onto wall as following procedures.
a. Fix the backplate on the wall with appropriate fixing sets.
b. Assemble the top cap of the inverter.
c. Mount the inverter onto the backplate and secure it with M4 screws.







3 Electrical Connection

⚠ DANGER

Death hazards due to high voltage existing inside the inverter!
Make sure that all the DC and AC cables to the inverter are not live before you start the electrical work.
Do not turn on the AC side or DC side circuit breaker until all inverter electrical connections have completed.

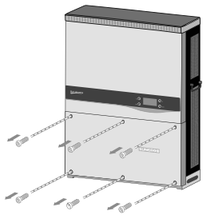
⚠ WARNING

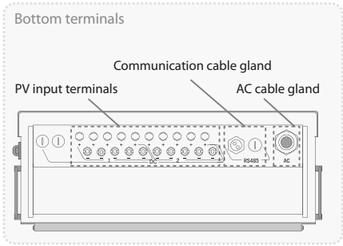
Neither the DC positive pole nor the DC negative pole of the PV string is permitted to be grounded.

★ **Recommended PV Array Open Circuit Voltage(25℃) 700…850V**

3-1 Open the Connection Cabinet

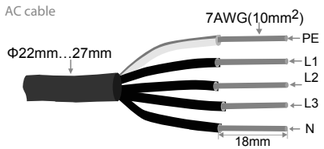
Loose the six screws on the front cover of the connection cabinet and remove the front cover to see the internal layout of the connection cabinet.

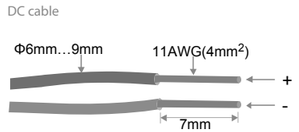




3-2 Cables Selection

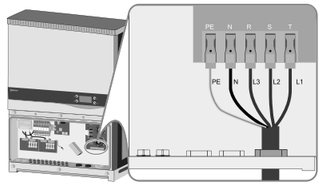
Cable	Conductor size		Recommended conductor size	
AC Cable	8AWG...5AWG	8...16mm²	7AWG	10mm²
DC Cables	12AWG...10AWG	4...6mm²	11AWG	4mm²
RS485 Comm. Cables	Twist-pair type cable or Twist-pair type shielding Ethernet cable		-	
Second PE Cable	10AWG…8AWG	6mm²	9AWG	6mm²





3-3 AC Connection

Pull the cables and connect L1/L2/L3/N/PE cables ends to the corresponding terminal blocks.



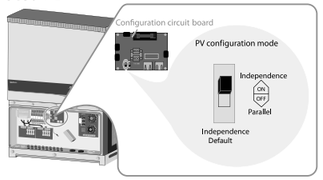
3-4 DC Connection

3-4-1 Selecting PV configuration mode for SG30KTL-M

In the SG30KTL-M, the two PV inputs can be configured in independent mode or parallel mode. Refer to the user manual for an appropriate mode selection.
PV configuration mode can be performed by a switch on the configuration circuit board.

- For independence mode: turn the switch ON.
- For parallel mode: turn the switch OFF.

SG30KTL-M

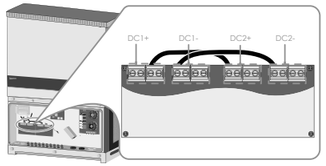


NOTICE

For SG30KTL, the switch must be set in parallel mode.

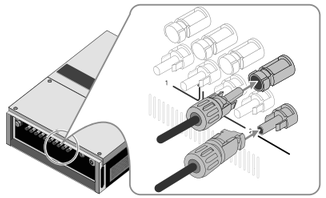
When selecting parallel PV configuration mode, you should connect DC1+ terminal to DC2 + with a cable of cross-section not less than 6mm² and connect DC1- to DC2- on the DC connection circuit board.

SG30KTL-M



3-4-2 Connection DC Cables

Assemble the DC plug-in connectors and connect them to the bottom terminals.
Check the polarity of the PV input before PV input connection.

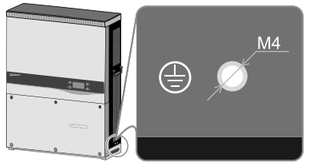


3-6 Second Protective Earth Terminal

The inverter is equipped with second protective earth terminal as specified in EN 50178.

Second PE Terminals

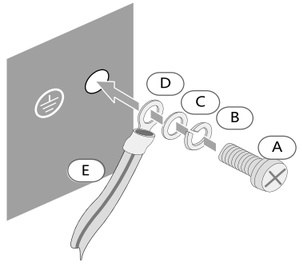
There is a second PE terminal on one side of the inverter. You may choose to connect PE connection.



Second PE Connection

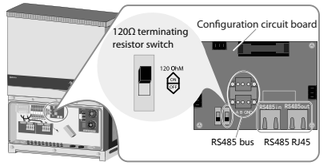
Item	Description	Remark
A	Screw	M4×12mm
B	Lock washer	-
C	Washer	-
D	Cable socket	-
E	Yellow-green cable	6mm²(9AWG)

*The connection parts are not included in the delivery scope.

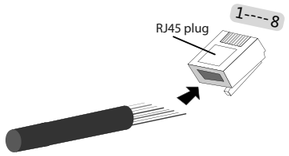


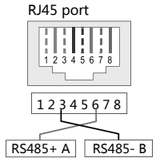
3-7 Communication Connection

There are communication cable gland (RS485) at the bottom of the inverter. Configuration circuit board has two optional connection terminals: RS485 A/B terminal blocks and RJ45 plug-in terminals, and a 120 Ω terminating resistor switch.



For RJ45 Connection the pins definitions are shown below:



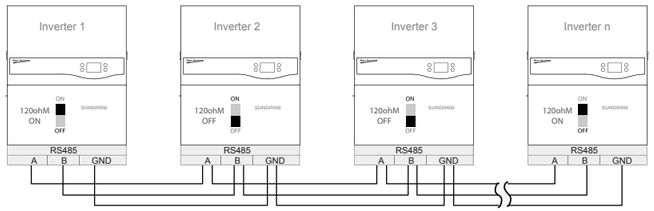


Corresponding Between Cables and Pins:

Pin 1: White-orange; Pin 2: Orange;
Pin 3: White-green; Pin 4: Blue;
Pin 5: White-blue; Pin 6: Green;
Pin 7: White-brown; Pin 8: Brown.

Pin 3 and Pin 6 are used for communication.
- Pin 3 to RS485- B
- Pin 6 to RS485+ A

Multiple inverters in daisy chain



3-8 Completing Installation

Inspect before commissioning and reassemble the front cover of the connection cabinet.

4 Commissioning

Before starting the inverter, make sure all installation and connections are completed and verified.

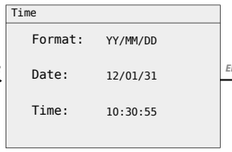
Step 1 Close the external AC circuit breaker.
Step 2 Rotate DC switch to the "ON" position.
Step 3 Supported that there is sufficient sunlight and DC power, the inverter begins to initialize and the LCD is activated to setup the interface. Press buttons to configure initial inverter parameters.

Button	Operation	Description
ESC	Press for less than two seconds	Move upwards or downwards, or scroll to set value. It is referred to as "Press ▼" hereinafter.
	Press for more than two seconds	Return to parent menu or cancel the command. It is referred to as "Press *ESC*" hereinafter .
ENTER	Press for less than two seconds	Move left or right, or turn pages. It is referred to as "Press ➤" hereinafter .
	Press for more than two seconds	Enter into the sub-screen or confirm the command. It is referred to as "Press *ENTER*" hereinafter.

Set Language

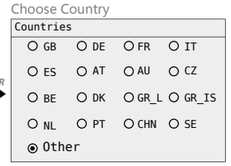
ENTER

Set Time



ENTER

Choose Country

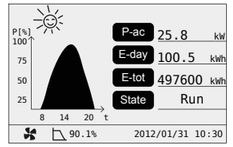


NOTICE

Only qualified personnel are allowed to adjust or setup parameters related to system protection functions.

Step 4 When the initial configuration is completed, inverter will enter into startup process. Observe the status of LED indicators and the LCD main screen. If inverter's commissioning succeeds, the "RUN" indicator will be lit and "RUN" will be displayed on the "State" area.

If inverter's commissioning fails, the "FAULT" indicator will be lit and "FAULT" will occur on the display. Press ▼ to view "current fault" information. Refer to the user manual for troubleshooting. Repeat the above procedures for inverter commissioning.

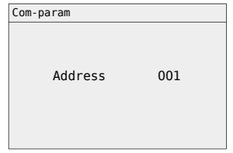


Step 5 Perform the following operation to set up the communication address for the inverter.

Main screen (Press *ENTER*) →Menu screen(Press ▼×3) → Set-param (Press *ENTER*) →Enter password(111111, Press *ENTER*, Press ▼×3) →Com-param (Press *ENTER*)

Press ➤ to move cursor right and Press ▼ to set the appropriate value. Confirm by Press *ENTER*.

The range of communication address is 1...247.



Refer to the user manual for detailed instructions!

The images shown here are indicative only. The actual product may differ. Specifications are subject to changes without advance notice.

SG30KTL_SG30KTL-M-QIEN-Ver11-201304 Version:1.1
QIEN F-H-001400